

REMARKS

Applicant thanks the Examiner for total consideration given the present application. Claims 1-12 are currently pending of which claims 1, 5, and 8 are independent. Claims 1, 5, 8, and 12 have been amended through this Reply. Applicant respectfully requests reconsideration of the rejected claims in light of the remarks presented herein, and earnestly seeks timely allowance of all pending claims.

35 U.S.C. § 103 REJECTION – Kaiwa, Mattila, Troxler

Claims 1, 5, 6 and 8 stand rejected under 35 U.S.C. § 103 as allegedly being obvious over Kaiwa (US 2002/0156646) in view of Mattila (US 2004/0254724). The Examiner rejects claims 2-4, 7 and 9-12 as allegedly being obvious based on Kaiwa and Mattila further in view of Troxler (US 2008/0004798). Applicant respectfully traverses these rejections.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. *See M.P.E.P. 2142*. One requirement to establish *prima facie* case of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. *See M.P.E.P. 2142; M.P.E.P. 706.02(j)*. Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, it is respectfully submitted that none of the cited prior art references, either alone or in combination, teaches or suggest all claim limitations. For example, independent claims 1 and 5 recite, *inter alia*,

“a position computing section that computes a position and time of the positioning terminal based on the positioning code decoded and the encoded carrier wave decoded by the decoding section in order to prevent false transmission of data from a true terminal; and

a certificate generating section that generates a document on position and time information based on a received signal corresponding to the identification code of the positioning terminal that is obtained by the position computing section” (*Emphasis added.*)

Independent claim 8 recites, *inter alia*, the steps for performing the above-identified decoding and position computing features.

It is respectfully submitted that neither Kaiwa nor Mattila, either alone or in combination, teaches or suggests the above-identified features of independent claims 1, 5 and 8.

As previously submitted, Kaiwa merely discloses a method and apparatus for assisting positional information service in which a service support gateway 1 is connected to a network 2. Kaiwa further discloses a service provider 3 having an Application Service Provider (ASP) 31 and a Content Provider (CP) 32. The service provider 3 provides a service relating to location of locating target person 4 by using the network 2. As disclosed by Kaiwa, the service supporting gateway 1 provides service provider 3 with a service of obtaining location information indicating the location of locating target person and a service of sending the location information to a specified destination. (See page 3, paragraphs [0042]-[0044].)

However, according to the claimed invention, the server encodes the transmission data by using the identification code of the terminal stored. The position computing section computes a **position and time** of the positioning terminal based on the positioning code decoded and the encoded carrier wave decoded by the decoding section in order to prevent false transmission of data from a true terminal. Then a certificate is generated **on position and time information based on a received signal corresponding to the identification code of the positioning terminal that is obtained by the position computing section**. Thus, decoding and transmitting position information by using the terminal ID of this invention is effective in the prevention of false transmission data from a fake or false terminal.

Further, the claimed invention is distinguished from Kaiwa in that the claimed invention **encodes both the identification code and the carrier wave** for transmission and the decoded transmission data, as position information, includes **a positioning code and the carrier wave**.

As previously submitted, a carrier wave itself includes no position information at all. Therefore, position information is normally considered not to include a carrier wave. Thus, using a carrier wave with a positioning code is another important character of the claimed invention. It is true that a carrier wave can include position information by computing position by using carrier waves obtained from two or more satellites. The waveform of a carrier wave is affected by ionosphere and convective-layer, and has the characteristics of time and position.

Therefore, a carrier wave transmitted from a terminal can easily be checked whether it is a false or not by comparing a carrier wave held by the server.

As described in paragraph [0004] of the instant specification, "[t]he GPS positioning method that is made available for private sector is roughly categorized into a method using a positioning code (a C/A code) and a method using the phase of a carrier wave. The positioning code, however, is known to be easily counterfeited. For example, by installing equipment that can generate the same signal as that of a GPS satellite, such as PseudoLite, near a GPS antenna, a false GPS signal may be inputted to the GPS antenna." More specifically, the positioning computing section of the claimed invention uses both the positioning code and the carrier wave to compute terminal position. Thus, the combination of the decoding section and the position computing section used in the claimed invention can strongly protect transmission data by preventing false transmission data from a fake or false terminal. It may be said therefore the position and time of a terminal computed by the position computing section based on the transmission data has high authenticity in that it is sent from the terminal having signals from a satellite.

Further, the server of the claimed invention can also solve the problem of so called "cold start." When a terminal computes its position based on the positioning code from a satellite, orbit information has to be obtained from the satellite before the computation begins. Therefore more time is required to obtain the orbit information. Usually, the server obtains the orbit information in advance. This allows the server to start computation as soon as it receives a positioning code and a carrier wave, which is time effective. Thus, in order to solve the problems associated with "cold start", the claimed invention requires, among other features, a decoding section (or step) that stores the identification code of the positioning terminal and decodes the transmission data by using the identification code in order to prevent false transmission of data sent from a false terminal, a position computing section that computes a position and time of the positioning terminal based on the positioning code decoded and the encoded carrier wave decoded by the decoding section in order to prevent false transmission of data from a true terminal, and a certificate generating section that generates a document on position and time information based

on a received signal corresponding to the identification code of the positioning terminal that is obtained by the position computing section.

As demonstrated above, the service provider 3 of Kaiwa merely provides a service relating to location of locating target person 4 by using the network 2. Nowhere does Kaiwa teach or suggest the above-identified features of claims 1, 5, and 8.

It is respectfully submitted that Mattila does not fulfill at least the above-identified deficiencies of Kaiwa.

As previously submitted, Mattila is directed to a conventional method for handling position-related information of cellular phones. Mattila merely discloses mobile terminal 100 which requests location information and an application server 200 which provides such location information to the mobile terminal 100. A consistent terminal location protocol (TLP) framework, especially in conjunction with the mobile terminal 100 accessing location-based services of the application server 200, providing required location information for operating the location-based services with its own location information. Mattila further discloses that the mobile location services framework, includes the positioning/locating functionality and the location-based service functionality altogether, as any form of a configuration between the mobile terminal 100 and network equipment employed. Further, as disclosed by Mattila, the TLP is employed between the mobile terminal 100 and the application server 200. Each one may represent location application and location server in the mobile location services framework. (See page 1, paragraphs [0006]-[0007].)

Mattila is distinguished from the claimed invention in that although Mattila discloses that position information is sent from a terminal, no where does Mattila teach or suggest using a carrier wave for computing position as required by the claimed invention. Thus, it is respectfully submitted that Mattila cannot teach or suggest a position computing section (or step) that computes a position and time of the positioning terminal based on the positioning code decoded and the encoded carrier wave decoded by the decoding section in order to prevent false transmission of data from a true terminal, and a certificate generating section that generates a document on position and time information based on a received signal corresponding to the

identification code of the positioning terminal that is obtained by the position computing section.

Thus, even if Kaiwa is combined with Mattila, the combined invention would not render claims 1, 5, and 8 obvious.

Therefore, for at least these reasons, it is respectfully submitted that claims 1, 5, and 8 are allowable over Kaiwa and Mattila. Troxler has not been, and indeed cannot be, relied upon to fulfill the above-identified deficiencies of Kaiwa and Mattila. Claims 2-4, 6, 7 and 9-12 are at least allowable by virtue of their dependency on corresponding allowable independent claim.

CONCLUSION


In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Ali M. Imam Reg. No. 58,755 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

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